women 2000 and beyond

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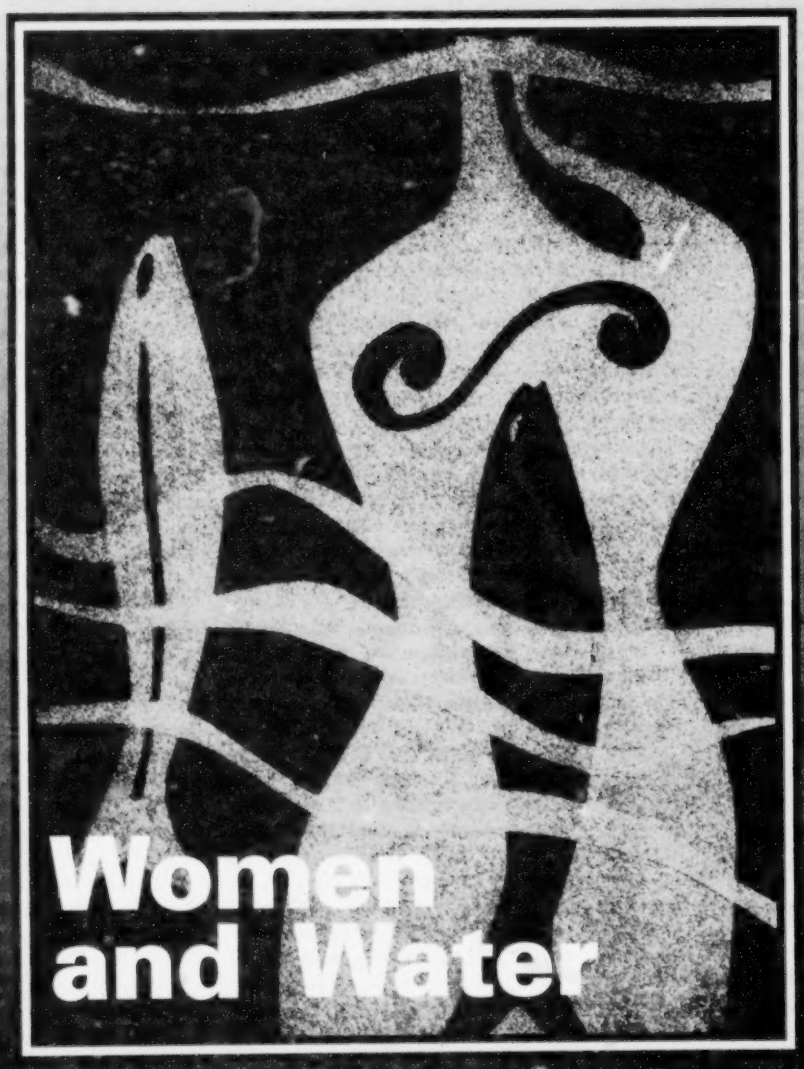

Women and Water

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Introduction

Water and development: a growing crisis

There is widespread recognition that the world is facing a growing water crisis, affecting the well-being of millions of the poorest people. Rapidly growing populations, urbanization, agricultural intensification and climate change (such as global warming) all contribute to greater competition and scarcity of water resources. Despite massively increased provision of water facilities over the past few decades and the development of low cost, sustainable technical solutions to many aspects of water provision, millions still suffer from water-related diseases and the physical, social and economic burdens associated with scarcity. A number of international initiatives aim to tackle this global problem through improving the governance of water and setting targets for provision of supplies to increased numbers of people within the general context of poverty alleviation and environmental sustainability. The greater involvement of women and the adoption of gender-sensitive approaches are increasingly seen as integral to the achievement of these targets. In the context of the global concern for improved water management (which encompasses sanitation and hygiene education), this paper aims to:

- Set out arguments for the importance of a gender-sensitive approach to water resources management;
- Review progress in achieving this and draw out the lessons learned from experience;
- Identify some of the key challenges and opportunities to gender-equitable water management;
- Suggest helpful resources for gender mainstreaming in water resources management.

Water is critical to the livelihoods and well-being of the world's population but millions suffer from lack of access to clean water, inadequate water for food production and the effects of pollution and environmental change. Increasingly, improved water supply management is seen as centrally important to poverty alleviation and to ensuring a sustainable future for millions of people with vulnerable livelihoods in marginal environments. The impact of inequitable access and poor management is huge. The United Nations reports 1.1 billion people (one in six of the world's population) lack access to improved drinking water, and 2.4 billion lack sanitation. As a result, the burden of death and disease related to inadequate water is high, with an estimated mortality of 3 million people a year, and millions more suffering water-related diseases. The majority of those affected are likely to be children under five years old, affected by diarrhoeal disease.[1]

Water is critical to food production. While the majority of agriculture is rain fed, irrigated agriculture provides some 40 per cent of the world's food and consumes 75 per cent of world's freshwater resources.[2] Supplies of freshwater are increasingly threatened by population growth, changing lifestyles (use of more water per capita) and pollution. Such stress is further magnified by other aspects of human development. The draining of wetlands for agriculture, the loss of trees to land clearance and soil erosion all affect natural water cycles and can contribute to increased floods and droughts. Those most affected by these changes often live in ecologically marginal areas; for example 41 per cent of the world's population live in river basins under conditions of water stress. The poorest people in these area are often disproportionately dependent on natural resources, and vulnerable to a deterioration of their livelihoods when access to these resources changes.

There has been increasing realization over the last two decades that technical solutions alone are insufficient to ensure equitable and secure access to water resources for the world's population. Access to water additionally depends on legal rights, social relations, cultures and customs, rights to land, control of resources (including labour) and access to appropriate regulatory institutions. This realization has led to an increased focus on the governance of water supplies, and particularly on community-based approaches for their management. Gender concerns are commonly assumed to be automatically incorporated within participatory community-based approaches, although as is illustrated in this paper, this is not necessarily the case.

International policy: from welfare to good governance and poverty alleviation

The past few decades have seen a changing emphasis on the role of women and gender relations in water. Early policies and interventions adopted a *welfare approach*, seeing women and children as the primary recipients and beneficiaries of improved water supplies. However, since the mid-1980s, a new policy consensus on water resources management was formulated at a number of international meetings focusing very much on the need to ensure the *efficiency and effectiveness* of water supplies.[3] This was partly in response to a changing macroeconomic climate that favoured economic adjustment and a reassessment of the role of the State, and to the perceived failures of previous supply-driven government provision to meet the needs of the poor. The 1990s consensus was expressed in the form of a series of "Guiding Principles" that were intended to shape the planning and management of projects and programmes.[4]

These "Guiding Principles" of policy have, in the past decade, moved

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away from a prime emphasis on pricing and distribution issues to a focus on the need for a more holistic view of water resources management. Integrated Water Resources Management (IWRM) is a cross-sectoral approach responding to the growing demands for water in the context of finite supplies. It is an approach that aims to secure the coordinated development of water, land and related resources to optimize economic and social welfare without compromising the sustainability of environmental systems.[5] Key points in policy include:

- Water should be treated as an economic, social and environmental good;
- Water policies should focus on the management of water and not just the provision of water;
- Governments should facilitate and enable the sustainable development of water resources, including a regulatory framework;
- Water resources should be managed at the lowest appropriate level;
- There should be recognition that women play a central role in the provision, management and safeguarding of water.

Shifts in focus on women and gender equality

In most recent international policy statements and initiatives, a focus on women has been seen as critical to improving the management or governance of water within an overall context of poverty alleviation. At the Second World Water Forum in the Hague (2000) it was recognized that, in addition to being prime users of "domestic water", women used water in their key role in food production and that women and children are most vulnerable to water related disasters.[6] The forum concluded that women's involvement would improve governance. Since women bear the brunt of the burden of poor management, they could be empowered through greater and more effective participation.

At the International Conference on Freshwater in Bonn in 2001, the policy statement emphasized the need for a gendered approach involving both men and women, while also suggesting that in order to achieve this, women's roles in water-related areas needed strengthening.[7] Further emphasis on equality (including gender equality) was given in the statement of the Third World Water Forum in Kyoto in 2003. In the quest for safe, clean water for all, many governments face a crisis of governance and need an integrated water resources management approach with transparent and participatory approaches that address ecological and human needs. The Ministerial Declaration stated that, "In managing water we should ensure good governance with a stronger focus on household and neighbourhood community-based approaches by addressing equity in sharing benefits, *with due regard to pro-poor and gender perspectives in water policies*. We should further promote the participation of all stakeholders and ensure transparency and accountability in all actions."(emphasis added)

Other international meetings and policy statements, concerned with a broad spectrum of goals from poverty eradication to environmental sustainability, have been concerned with both water and gender equality. The Millennium Development Goals adopted at the Millennium Summit at the United Nations in New York in 2000 included goals to "Promote Gender Equality and Empower Women" and to "Ensure Environmental Sustainability". One of the targets for the goal on ensuring environmental sustainability is to "Halve by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation".[9] At the World Summit on Sustainable Development in Johannesburg (2002) commitments were made to promote women's empowerment and emancipation and incorporate gender equality in all the activities specified in Agenda 21, the Millennium Development Goals and the Plan of Implementation of the Summit.[10]

It has become increasingly accepted that women should play an important role in water management and that this role could be enhanced through the strategy of gender mainstreaming. Gender mainstreaming is "the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all spheres so that women and men benefit equally."[11]

In water policy, gender mainstreaming is justified for reasons of efficiency and effectiveness; a gender-sensitive approach helps to ensure that supplies are provided and managed more sustainably. It is also argued that gender mainstreaming helps to empower women and so furthers broader goals of equality within society, contributing to poverty alleviation and social inclusion. In following sections some of these ideas are considered in more depth and some of the key implications for water resources management are identified.

The importance of gender perspectives in water resources management

Defining gender perspectives

Although many policy statements still focus on women as disadvantaged, others argue that it is ineffective to focus on women in isolation from their broader social relationships. A concern for women has been expanded into a gender

Dangers of leaving women out of project design

An example from Nepal shows the unfortunate consequences of not taking into account gender needs in project planning. The intervention resulted in inadvertently increasing women's burden.

In all the communities involved in the Nepal research, women complained that their water collection time significantly increased (nearly four or five times) after they received the improved water services. This is because the tapstands and the tubewells are located along the roadside, where they cannot bathe freely and wash their clothes used during menstruation comfortably, or shame of being seen by males. In order to avoid this, women in Hile village in east Nepal . . . carry water all the way to their homes several times each day, spending significant amounts of energy to do this. In three villages . . . women reported waiting until dark to undertake these activities. . . . All these women also complained that the surveyors had not involved them in designing the tapstands or tubewells themselves.

Source: Shibesh Chandra Regmi and Ben Fawcett, "Integrating gender needs into drinking water projects in Nepal", *Gender and Development*, vol. 7, No. 3 (1999), p. 2.

focus that looks at the relations between men and women and how these shape access to resources, participation in decision-making and the exercise of power within households and communities. If women are disadvantaged and subordinated in their relations with men, then changing this situation requires changes in the views and actions of men as well as women. Gender analysis sees relations between men and women not as biologically determined differences of sex but as socially shaped differences of roles and expectations that are culturally specific but can shift and change over time.

Gender approaches to development are therefore underpinned by the notion that it is possible to promote changes in gender relations, in favour of more equitable divisions of labour and of power between women and men, and that it is possible to design interventions to facilitate this process. A gender approach to water resources management, for example, strives for a balanced division between men and women in the following areas: access to information; physical work; contributions in time and cash; decision-making; and access to and control of resources and benefits. Such an approach would take into account:

- The differences between women's and men's interests, even within the same household, how these overlap or conflict and how they are negotiated;
- The conventions and hierarchies that determine men's and women's position in the family, community and society at large, which often lead to the subordination of women;
- The differences among women and men based on age, wealth, ethnicity and other factors;
- The way gender roles and relations change as a result of social economic and technological trends.[12]

A number of arguments that are outlined below support the adoption of a gender approach to water resources management.

Promoting project effectiveness

Several studies have looked at the links between adopting a gender-sensitive approach or incorporating gender perspectives into planning and programming and the achievement of project effectiveness and sustainability. These studies highlight a positive impact on project effectiveness from participatory, gender-sensitive approaches. Facilities are more likely to be technically appropriate, conveniently situated and well used and maintained where both women and men have been consulted. Where gender-sensitive approaches promote the involvement and inclusion of all members of the community, water supplies are better used and the consequent benefits are therefore greater.[13] These benefits may include a considerable reduction of water-related diseases, with consequent effects of less productive time lost to illness, better child attendance at school, less burden of care and women's time released for other activities.

Due to the gendered divisions of labour, women and men may have different local knowledge about natural resources, and indeed different concerns about the quality and quantity of water available. Building these different interests into the design and management of supply systems is likely to ensure more effective and inclusive use, and thus greater benefits. For example, women as primary fetchers of domestic water suffer disproportionately from the breakdown of facilities and therefore may make the most reliable caretakers and maintenance technicians. However, due to prevailing gender relations in their particular socio-economic contexts, women may also face difficulties in exercising such roles effectively due to restricted mobility, funds and lack of time. A gender-sensitive approach would identify these constraints and take measures to overcome them.

Empowerment and equality

The empowerment of women is necessary to ensure gender and social equality and would enable women to take control of their own lives, to challenge the oppressive aspects of social systems individually and collectively and to enter into relations with men on the basis of equality. These broad and ambitious goals are related to the more instrumental aims of ensuring efficient water supplies. The impacts of improved water supplies can be translated into tangible benefits for women: better health, time freed up for other activities and more productive potential. All these outcomes can provide the basis for greater equality in their everyday lives. Moreover, a greater say and improved skills in decision-making and in managing resources may strengthen women's ability to contribute to the transformation of societal inequalities.

Without specific attention to gender perspectives, projects may reinforce inequalities and differences between men and women even when there is an explicit focus on women's participation. For example, early initiatives emphasizing women's roles as the bearers of water and the managers of household water may have served to reinforce gender inequitable divisions of domestic labour. To further goals of equality, gender sensitivity should be combined with wider social analysis, and an appreciation of other power dimensions in communities.

A gender-sensitive approach helps to overcome some limitations of participatory approaches in development interventions. Experience suggests that participatory approaches are not necessarily either gender or power sensitive; local participation may be dominated by elders, wealthy people, those of a particular caste or ethnicity, and men. Indeed women may feel inhibited from participating because of their workload, cultural norms that make it difficult for them to travel to or speak in meetings, and relations of respect and deference to elders and to men. However, there is evidence that where participatory approaches are combined with gender sensitivity, for example in identifying appropriate spaces and forms of articulation to facilitate women's involvement, some of these barriers to inclusion can be overcome.[14]

The need for gender perspectives to include social and poverty analysis

A study in Zimbabwe showed that, unless gender sensitivity is combined with social analysis, community management of water supplies is not automatically inclusive and equality enhancing. There was recognition that women should play an increased role in water management, and a requirement that waterpoint committees should primarily consist of women. However, poor women were less likely to be elected to positions on waterpoint committees or village development committees. When asked the criteria used to elect people to positions of responsibility villagers two qualifications were repeatedly mentioned: (1) someone they could respect (for position, influence, hard work or ability to forge consensus over difficult issues) and (2) someone with resources such as a bicycle or cash (so they could represent the village at district headquarters when required). Poor women generally have less access to water supplies and greater constraints on time and labour resources than other women or men. They are likely to be in poorer health and their children are at greater risk of water-related diseases. They therefore could benefit most from improvements that bring water supplies closer to their homes. However, they are least likely to participate in the collective decision-making that will bring this about.

Source: Frances Cleaver, "Incentives and informal institutions: gender and the management of water", *Agriculture and Human Values*, vol. 15, No. 4 (1998), pp. 347-360.

Challenges to implementing a gender approach

There are many reports of projects in which women appear to be participating fully and reaping the benefits of increased water supplies. Where this is happening women are learning new technical and managerial skills, being increasingly involved in decision-making at the household and community levels and turning water-related projects into income-generating or development opportunities that benefit themselves and their families.[15]

However progress is uneven. Meaningful women's involvement and attention to gender equality has yet to be achieved at many levels of water management. In the mid-1990s, a review of policy documents showed that a significant number still made no explicit mention of gender perspectives while previous studies showed that, unless specifically targeted, only small numbers of women benefited

Women learn new skills through involvement in management

A project called Watersheds and Gender has taken a proactive approach to women's greater involvement in water management. The project, coordinated by CARE-El Salvador and three local NGOs, has promoted women as leaders, training them as community promoters and managers of small-scale companies. Women have been encouraged to sit on the board of directors of various water systems. Through training and participation in management, women have acquired technical agricultural knowledge and are performing tasks that, in the past, have been considered suitable for men only.

Source: N. Maharaj, "The gender approach to water management: lessons learnt from around the globe", Gender and Water Alliance/WEDC, 2003, p. 12.

from water supply projects.[16] Much of the progress that has been made is in those areas perceived by planners as more naturally associated with women, including domestic water supply and sanitation. Attempts to extend women's roles in the areas of irrigation and drainage face other difficulties, including broader issues of land and access rights.[17] At the international level, women's involvement in water-related issues is also limited as this is a field of expertise that continues to be dominated by men. There is still much scope for activities and strategies to ensure that meaningful roles for women alongside men in water management become a reality.

There continues to be tension in policy approaches between efficiency and equality concerns. While the principle of women's increased involvement has generally been accepted in the water sector, there are considerable variations among organizations. The predominant concern continues to be the sustainable achievement of efficient distribution of water rather than empowerment, equality or broader societal changes. Thus, for example, while the World Bank emphasizes women's involvement in the interests of supporting a demand-based approach, efficiency and effectiveness and the sustainability of interventions,[18] the Swedish International Development Agency (Sida) places considerable emphasis on equality objectives.[19] A recent review of 71 water policies, acts and regulations reveals that those which focus primarily on efficiency and effectiveness generally define what women can contribute to this, whereas those concerned with broader goals such as equality and poverty alleviation emphasize the desirability of a balance between men's and women's roles.[20]

Water resources management in the context of complex livelihoods

This section focuses on aspects of livelihoods that shape both gender relations and access to water resources. The kinds of questions to bear in mind while considering water resources management from a gender perspective include:

- How men and women use water resources and for what purposes;
- How contributions to water supply improvements (labour, time, payments and contributions in kind) are divided between women and men, rich and poor;
- Who makes decisions about water resources;
- Do men and women of different age, wealth, religious and ethnic groups bear the costs and benefits of managing water resources equitably;
- How gender-equitable approaches can be institutionalized.

Water for nature, water for people, water for food

Adopting a gender-sensitive approach requires a holistic analysis of resources and relationships and the contexts within which people live their lives. For many years the "water sector" has been divided into those concerned with "*domestic*" water supply (water for drinking, washing and maintenance of hygiene); "*productive*" water (mostly water for irrigated food production and also for large livestock); and the "*environmental*" water sector (concerned with flood coping mechanisms, drought mitigation, mangrove swamp management, river basin management and so on).

Despite acceptance of the need for integrated water management, many interventions remain narrowly subsectoral in focus. Irrigation planners are still concerned largely with crop production, just as health planners focus on the quality and quantity of water used in the household as a reproductive unit. This sectoralization inadequately reflects the ways in which people organize their lives. Both rural and urban livelihoods are comprised of complex and interrelated processes, often shaped by gender and other social relations. Women may consider the irrigation canal a handy place for washing clothes or drinking water supply critical for their vegetable gardens and keeping small livestock alive. These concerns of women are, however, often not incorporated into planning processes. A gender-

sensitive approach may help to identify complementarities between different uses of water and facilitate integrated water-resource management. A brief outline of the differing interests in water will help to illustrate some of these linkages.

Women have long been a focus in the domestic water subsector, their central place based primarily on the idea of their "natural" role as household managers. For many years women have been identified as the main drawers of water;[21] the primary promoters of hygiene behaviour among children and those most likely to benefit from improved water supplies in terms of alleviation of the burden of their domestic tasks. In the 1980s, much of the work associated with the International Drinking Water Supply and Sanitation Decade emphasized the water sector as a "women's sector" based on women's responsibilities and the household division of labour.[22] Much work identified multiple public and private roles for women in the management of domestic water, detailed the complexity of interaction around women's water use and highlighted the need for planning within a social context. Women have played roles in this sector, as village health workers, hygiene educators and local-level latrine builders and water-supply technicians. However, the domestic water subsector has been slow in expanding its focus to women's productive concerns and to men's involvement in health and hygiene aspects of water and sanitation.

A concern with gender perspectives has only recently been incorporated into the irrigation sector, alongside the recognition of women's major role as farmers and producers of food.[23] However, there are problems with incorporating a gender analysis in irrigation, which has long been a highly technical sector. Irrigation planning is dominated by infrastructural and engineering approaches with focus on the construction of systems, the proper maintenance of infrastructure, the distribution of water and minimization of losses within this. The emphasis has been on water users as farmers and on the outputs in terms of increased agricultural production. Irrigation management transfer programmes encourage farmers and rural communities to become the managers of such supplies, with a particular concern with devising workable rationing and distribution systems. Local management, often conducted through irrigation committees or farmer associations, is usually dominated by men. Studies have shown the strategies that women farmers have to employ to secure their irrigation needs, such as stealing water,' taking water at night, and using male relatives as champions to secure access to such water.[24] Access to irrigated water is also heavily dependent on land rights (in which women often have disadvantageous positions) and on control over labour. Many irrigated fields are worked by women and children, and yet it is the men who dominate decision-making about the distribution of water and often market the proceeds and determine the use of the cash generated.

So far there has been little emphasis on gender perspectives in subsectors devoted to "Water for nature",[25] although it is well known that men and women may have differing interests in drought mitigation, flood protection, and mangrove, forest and fisheries management. For example, in fishing communities men might fish in offshore or major inland water bodies, while women fish close to shore, and the fish-processing activities undertaken by women may be under-recognized. In the 1980s and 1990s some "ecofeminists" claimed that women's gender-specific interests coincide with environmental conservation and that their instinctive understandings of nature make them "natural" environmental managers.[26] However, such views are problematic in gender-equality terms, as they mirror ideas that women are the "natural" managers of domestic water, and that therefore the burden of responsibility for such management (and its outcomes) should fall upon them. This simplified approach has been replaced by a more nuanced understanding that men and women do have different priorities and perceptions regarding natural resources and that these will shape their involvement in management.

In areas of environmental degradation and high male labour migration, for example, women assume the prime responsibility for food production and so changes to land access, water supplies and labour availability may disproportionately affect them. Poor rural families tend to depend heavily on common property resources such as water sources, grazing lands and forests for food, fuel and fodder. Entitlement and access to natural resources is often shaped by gender and other power relations. A gender perspective could help to analyse how land rights, rights of use and command over labour help to define inclusion and exclusion from such resources, particularly in times of environmental stress and natural disaster. For example, in Bangladesh people cope with floods by emergency selling of assets. Women have been found to be at greater risk of long-term flood-related economic loss than men, because their assets such as jewellery and household utensils are devalued in such circumstances and command lower prices than men's assets such as farm implements and animals.[27]

A gender perspective also facilitates looking beyond uses of water and other resources to the societal relations that place people in positions of advantage and disadvantage. Recent work has used social and gender analysis techniques to move beyond the identification of women's and men's separate vulnerabilities towards understanding how building on livelihood interdependencies within communities can strengthen their resilience in the face of natural disasters.[28]

Environmental degradation, livelihoods and gendered impacts on health

The Aral Sea in Kazakhstan and Uzbekistan, once one of the world's largest inland freshwater sea, is now shrinking due to unsustainable water use. A large cotton monoculture, developed under the Soviet regime, has been blamed for over-abstraction, mineralization and chemical pollution of water. There is a strong link between these environmental problems and the poor health of local people, particularly women and children. For example, in Karakalpakstan (Uzbekistan) rates of maternal mortality, anaemia, miscarriage and birth defects are all higher than the national average. Infant mortality rates are exceptionally high and many children suffer skin disease, diarrhoea and acute respiratory illness. NGOs working in the region have promoted an integrated approach to tackling the problem which includes integrating agricultural, environmental and health policies and mobilizing women to understand the causes of their ill health and to work collectively to change their environment and livelihoods.

Source: Women's Environment and Development Organization, "Women respond to a shrinking Aral Sea", *http://www.wedo.org/ehealth/respond.htm*

Divisions of labour in water resources management

Misunderstandings about gender roles are often the result of over-simplifications about the nature of the household. Understanding household dynamics is critically important to a gendered approach because it helps to highlight such issues as who allocates and controls labour within households; how rights and access to land and other resources are negotiated; who controls cash; and how the balance between productive and reproductive activities within households is achieved.

A good example to illustrate the need to consider household dynamics more clearly is that of work with water at the household level; including collection, storage, rationing and use. Gender analysis has highlighted women's triple labour burden—that (1) women take the primary responsibility for *reproductive work* (care of children, old people, household food, health and basic needs provision; (2) women are also heavily involved in *productive work*, such as farmers, cash labourers, or in other income-generating enterprises; and (3) women often also take on voluntary *community work*.[29] In relation to women's perceived role as the main bearers of water, there has been a particular focus on identifying ways in which time spent on water carrying can be reduced, by bringing water supplies closer to the home and increasing time for more productive or social developmental tasks.

A focus on women's role in the household economy is useful and making women's domestic work visible is critical to an understanding of the constraints under which they operate. But a detailed gender analysis requires understanding both gender-specific differences in water work and the interdependencies that underlie these. Questions to consider, for example, might include:

- Who actually works with water in a household—is this work delegated to younger wives, to male or female youth, or to children;
- Who is able to command the labour of others in a household;
- Whether girls do more water collection work than boys and, if so, what the health and social consequences are;
- How men and women perceive water work differently—what emphasis is given to the time and the physical effort involved;
- How a balance is negotiated between the different water needs and labour allocation demands of the household;
- Whether men and women are rewarded differently for technical/management work in relation to water supplies. Who does paid work, who does voluntary work;
- How gender-specific divisions of labour change in response to economic and environmental change.

Some of these questions will be addressed in following sections. This section concentrates on considering differing priorities regarding time spent on water collecting.

In the water sector, it is commonly stated that improving water supplies, and particularly bringing them closer to home and making them more reliable, will result in changes to the gender divisions of labour. With improved water supplies women may be able to use the saved time and energy for productive activities, including income-generating activities; participation in community decision-making; better food preparation (with positive impacts on infant nutrition); the care and education of children; or releasing girls from domestic tasks to go to school.[30]

However, an uncritical acceptance of such assumptions should be avoided. Even if the water collection journey is shorter, women may collect more water and therefore the gender burden of water collection does not change. Time saved from water collection cannot necessarily

be spent in ways of women's own choosing. They may lack decision-making opportunities and access to materials and markets to undertake income-generating activities. It may be difficult for them to participate in public meetings, even where they have the time to do so. Additionally, time saved by women may be demanded by other family members to fulfil social duties, such as caring for parents or parents-in-law.

Provision of additional water supplies alone does not necessarily reduce the burden of water work. Research into domestic water collection and use in East Africa (comparing data published in 1972 and that collected in a follow-up study in 1997) shows that despite an increase in facilities provided women are now travelling *further* and spending considerably *more* time queuing for water than in the 1970s. Population pressure, unreliable supplies and economic stress also resulted in an increase in children drawing water, and an increase in the number of male youths drawing water from "domestic" supplies for commercial purposes.[31]

Differing interests and gendered negotiations

Societal structures and understandings of culture often mean that men are seen as the head of the household. However, understanding the negotiated nature of the household economy means that both the potentials and constraints of women exercising choice and authority within households and communities are now better understood. The different positions of women and men in households and the gender divisions of labour mean that women and men may be concerned with very different aspects of water supplies.

In terms of water use it is not very helpful to see women's interests as entirely different from men's, nor to see the household as having uncontested unitary interests. Rather differing priorities of men and women are negotiated, and compromises reached to ensure that the household meets its main water needs. Such negotiations take place both within the household and in public, at the waterpoint and in community meetings.

Research in rural Zimbabwe observed men and women reaching accommodation over water use at public boreholes where women were collecting water for domestic purposes and men for watering cattle.[32] Gender differences in the priority given to time saving meant that women were able to obtain precedence over cattle in drawing water at busy times. Conversely, when vital cattle-related tasks, such as dipping, were taking place, domestic water collectors were delayed by the requirement to pump some water into the cattle dip before they took some for their own purposes.

The outcome of such negotiations may vary according to context and location. Carney documents an interesting example of Gambian women individually and collectively withdrawing their labour from their husbands fields when a project to improve irrigated rice production resulted in an increase in their workload without associated improvements to their rights over land.[33] However, there are very many more examples (such as those given below) where women are unable to negotiate their interests at the household level and are constrained from pursuing grievances through community institutions. This variability of women's ability to negotiate highlights the need to understand more about how decisions are made in particular circumstances, and how women and men take part in decision-making and influence the process and outcomes.

Gender and the limits to women's autonomy

Relations of patriarchy can mean that women occupy subordinate positions in their marriage, their family and in relation to community structures and norms, as the following example from the United Republic of Tanzania illustrates.

This woman farmer claimed to be ill-treated by both her husband and his first wife. Doubts over the paternity of her child make her vulnerable in her marriage and she has no command over household resources. She sells her labour in order to get extra clothes and food for herself and her child and depends on neighbours to help her with salt and soap. She would like her father to return the bride price of 25,000 shillings so that she can separate from her husband but the father claims that he no longer has the money. She feels she "has no language" to report the situation to the Hamlet Chairman who could intervene, so she just has to stay and tolerate the situation.

Source. Sustainable Management of Usangu Wetland and its Catchment Project (SMUWC), Final Report: Rural Livelihoods, 2001. *http://www.usangu.org/reports/rural livelihoods.pdf*

Rights, access and social structure

There is a need for increased scope for negotiating women's interests within households and in community-level resource use. There are, however, serious concerns about women's

ability to exercise agency in this way. The strength of women's negotiating positions may depend crucially on the social and legal structure of rights within which these negotiations take place. Women's access to water and their role in management do not exist in a vacuum, but are shaped by other social relations and structures—relations of family and marriage, caste and class.

Marital relations may play a large part in defining women's access to resources and ability to act autonomously, especially where they are living with the husband's family or in the husband's home village. Other examples show how women irrigators are impeded from full participation in irrigation management by their lack of entitlement to inherit or own irrigated land, while poor urban women suffer parallel disadvantage in rarely having security of tenure of their dwellings, and yet being responsible for raising cash to pay for water and sanitation facilities.

Women, water and health

Linking water, sanitation, health and hygiene practice

There are clear benefits to be gained from improved access to water and sanitation including reductions in water-related mortality and morbidity and positive impacts on productivity, child development and quality of life.

Women's care responsibilities are often increased by water-related diseases, thus intensifying their labour, reducing the amount of water they can collect, and limiting the time they can spend working or engaging in community action. Additionally, the impact of AIDS (although not a water-related disease) is so far-reaching that it affects the whole range of household capabilities and is increasingly constraining people's active participation in water resources use and management. For example, in South Africa, women carers find themselves physically taxed by the need to collect more water for bathing the sick person. In urban areas loss of employment and household income through sickness leads to inability to pay for utilities (water and electricity) and ultimately disconnection.[34]

A gender analysis helps identify ways in which the health impacts of water resources affect women and men, girls and boys differently. For example, eye infections are particularly common in water scarce areas, where inability to maintain good hygiene is an important factor in blindness and trachoma in children. Blindness also affects the children's main carers who come into close contact with the infections, and this is thought to be why blindness disproportionately affects women worldwide.[35] Malaria, a water-related disease that causes widespread morbidity and mortality in Africa, disproportionately affects women during pregnancy. Pregnant women with malaria are more likely to develop anaemia, which leads to higher risk of maternal death. Infants born to mothers with malaria are likely to have low birth weight and thus be vulnerable to other infections and diseases.[36]

Another example of gender-specific disadvantage is the health impact of water work on women. Where girls and women head-load water, this can have very negative health effects on them. It is common to hear rural people say that men do "heavy work" such as clearing fields, with the implication being that women do comparatively light work. However, buckets of water carried on the head can weigh up to 40 kg., and the ergonomics of water carrying has been shown to have detrimental effects on the development and health of the spine, leading to deformities, arthritic disease and injury.[37] The energy consumption involved in water collection can have negative impacts on people with poor nutritional intake. One study in Zimbabwe estimated that the task of water collection required over 30 per cent of average daily per capita calorie intake.[38]

It should not, however be assumed that all the health burdens associated with poor water supplies are borne by women. In sub-Saharan Africa, boys suffer more bilharzia (schistosomiasis) than girls because their gender roles as herders bring them into contact with water supplies contaminated with the parasite more often.

In South Asia, the division of labour in irrigation work means that women do not handle pesticides (for fear of adverse affects on their fertility). The detrimental side effects of pesticide use and pesticide-related deaths are therefore disproportionately found among men.[39] These examples illustrate the importance of a gender-sensitive understanding of livelihoods in relation to water resources and the differential risks inherent in these. While women may generally bear the burden of inadequate water supplies and water-related work, there may also be particular vulnerabilities relating to men's roles. Gender analysis helps identify and understand these risks and illustrates how working towards gender equality should involve benefits to both men and women.

Gender and sanitation

Improved sanitation is critically linked to achieving the health benefits of clean water supplies, as it helps to reduce the risk of faeco-oral transmission of disease. Well used sanitation facilities, along with health education and greater water use, are thought to reduce the mortality caused by diarrhoeal disease by about 65 per cent and morbidity by 26 per cent.[40] At the 2002 World Summit on Sustainable Development held in Johannesburg, South Africa, a target was set to reduce by half the proportion of the 40 per cent of the

Gender-specific preferences in sanitation

Studies of water and sanitation interventions show that women have a strong concern with privacy. In countries like India where sanitation is not widely available to poor people, open defecation by roadsides or on waste ground seems to provide less of a problem for men than for women. Women report waiting until after dark, with detrimental effects on their comfort and well-being. A study in Cambodia, Indonesia and Viet Nam showed women putting a greater value on household toilets than men, and specifying more benefits of improved sanitation ranging from convenience and privacy to a clean home environment. The benefit of household toilets that men valued most highly was the ability to use night soil as fertilizer on their fields.

Source: N. Mukherjee, "Achieving sustained sanitation for the poor: policy lessons from participatory assessments in Cambodia, Indonesia and Viet Nam", Jakarta, Indonesia, Water and Sanitation Programme for East Asia and the Pacific, 2001 (*http://www.wsp.org/pdfs/eap_achieving.pdf*).

global population lacking satisfactory sanitation by 2015.[41] This target was later reinforced as one of the targets of the Millennium Development Goals. A number of social and gender issues relate to the achievement of this and other similar objectives.

Sanitation is often seen as the responsibility of women within a household, and women are therefore more likely to bear the costs of building toilets, sometimes in opposition to men. Women are also often concerned with child safety in toilets, whereas men have been shown to be far more concerned with sufficient supplies of water for washing after defecation (water that the women supply). "Improved" technical solutions, such as manual flush latrines, often implemented in high-density urban areas, may result in additional burdens to women as they must collect the extra water required for flushing.[42]

A number of studies have illustrated that gender-specific preferences and understandings are not simply related to economic positions and divisions of labour, but to notions of morality and proper conduct. Cultural perceptions of decency related to sanitation facilities may also be gender specific. For example, in some cultures women would be reluctant to use toilets when the design allows their feet to be seen under a door or where they can openly be seen entering the toilet. It may also be considered inappropriate for a woman to share a toilet with her father-in-law. Such insensitive design may discourage women from toilet use. Technical project planning therefore needs to take into account differing cultural ideas about proper gender relations and behaviour.

As seen above, technical solutions alone do not necessarily yield benefits. For example, some sanitation and hygiene education initiatives seek to reduce water-related disease by educating children into hygienic practices. This is done by providing school toilets and washing facilities and holding public awareness campaigns. Integrating hygiene concerns with women's need for jobs and facilities may enhance the acceptability of interventions.

However, experience shows that such interventions can have gender-

Integrating women's interests in the management of hygiene facilities

In the Fergana Valley in Central Asia, local villagers, having successfully participated in improving their drinking water supply, now want better bathing facilities. As one woman said, "Our dream is to have a bath once a week". With the assistance of NGOs, four women leaders initiated a programme to build and manage public bathhouses in two villages. The bathhouses will address hygiene concerns but also create jobs for the unemployed women of both villages. Disadvantaged people (such as the elderly, orphans and single mothers) will be exempted from paying the nominal fee. In response to women's expressed interests, each bathhouse will include an annex for a hairdresser. It is anticipated that in constructing facilities based on women's felt needs, use of the bathhouses will be high, thus reducing the rates of skin disease and providing a positive focal point for further health campaigns.

Source: "Community water management in Kyrgystan and Uzbekistan: strengthening the role of women", available online from: *http://www.Columbia.edu/cu/musher/International%20Fellowship%20files/Gungoren*

differentiated impacts that need to be taken into account in design and implementation. All too often, schoolgirls have been allocated the task of cleaning the toilets, a job that not only reproduced inequitable divisions of labour, but sometimes has rendered them more vulnerable to rape and sexual assault. Examples are reported of girls not using school toilets that they perceive as dirty and dangerous. About one in ten school age African girls does not attend school during menstruation, or drops out at puberty because of the lack of clean and private sanitation facilities.[43]

The above examples suggest that perceptions of appropriate facilities may vary across cultures and between women and men. This point is reinforced by evidence of the strength of women's cultural beliefs over the causes of diarrhoeal disease in children. Kaltenthaler has shown that in Botswana women's beliefs about the causes of their children's diarrhoea did not correspond to technical understandings.[44] Socially unacceptable behaviour such as adultery of the mother, eating the wrong foods and climatic change were more important causal factors in their accounts than clean water supplies and hand washing before preparing food.

The prime role of women in hygiene education and their greater interest in sanitation should not automatically be read as a prescription to target women to improve facilities. For example, targeting credit at women to help them build latrines, for example, may help to reinforce inequitable household burdens of responsibility for providing such facilities. A health education programme in Mexico originally directed its materials towards women and used pictures of women and children in promotional efforts. After reassessment and comments from men and women, a second brochure was produced showing both men and women undertaking caring and hygiene-related tasks. Both men and women preferred the revised version.[45]

The economics of water resources management: paying for water

Recent policy initiatives have emphasized cost-sharing arrangements as an important part of demand-based approaches. User payments towards the provision and maintenance of water facilities is thought to ensure the commitment of users to proper use, to give the users a sense of "ownership" over the facilities and to overcome dependency attitudes generated by the provision of water supplies by State or development agencies. High levels of "willingness to pay" for improved water supplies, often expressed by women, are thought to indicate a greater commitment to sustainable use and management. Payments are variously sought from communities in cash contributions to the cost of supply and maintenance (particularly in urban areas) or in labour contributions (primarily in rural areas).

As with other aspects of water supply, paying for water has gender implications. Poor people generally are disadvantaged by market mechanisms and face high opportunity costs of securing access to water in a market economy. Women may be disproportionately disadvantaged as they generally command lower wages for paid work (including casual work), have less command over productive assets and cash in the household and have restricted access to markets for the sale of their produce.[46] Women may well support the charging of

Paying for water with labour (India)

Following considerable discussion between communities and staff, (on a project in India) it was decided to pay wages to villagers for their work on the water supply. The wages were fixed at 50 per cent of the state minimum for unskilled labour, the other 50 per cent was assumed to be the community members' contribution in terms of income foregone. The wage rate of Rs 25 a day on the water supply turned out to be the equivalent to local wage rates for casual agricultural labour (which was half the legal minimum). Poorer households who relied on such casual labouring as a source of income considered the payment reasonable. Better-off households did not need the income from the community work, and left this to poorer households. In the case of irrigation water they therefore reaped substantial material benefits over the next few years at no cost. Poorer households, with little or no irrigatable land, bore more of the initial costs through their labour contributions and were unable to reap substantial longer-term benefits. In some villages, even poor men were unwilling to work for the wage rates offered as they could earn far more through migrating for work. However they were quite willing for the women of their households to work at the lower rate.

Source: Ian Tod, Akhilesh Parey, Ragubendra P. S. Yadav "How can we design water resources interventions to benefit poorer households?" Paper given to Alternative Water Forum, University of Bradford, May 2003, *www.brad.ac.uk/acad/bcid/GTP/altwater.html*

water fees as they bear much of the burden of water collection, and they are often perceived within the household as being responsible for water provisioning. Tariffs, however, are often based on household income, that women do not necessarily have sole command over. If they are responsible for paying for water from their own resources, their multiple disadvantages in income generation make this an additional burden.

If poor women face real constraints in paying cash for water supplies they are often no better placed to provide labour. Recognizing constraints on cash incomes, projects sometimes specify that the community should contribute labour in lieu of cash. It is assumed that labour is a resource available even to the very poorest. Yet, women often have difficulties contributing labour, as the example above shows the opportunity costs of giving up paid casual work to contribute to the communal supply. Men and women, rich and poor are very differently placed to contribute in this way. In addition, women's time is consistently undervalued, as the example of a water resource intervention in support of rural development in India illustrates.

The gender-specific nature of markets and their embeddedness in social relations of inequality lead to questions of whether charging for water can enhance gender equality. There are strong efficiency and sustainability arguments to support user contributions. Some claim that a gender perspective can help in counteracting or ameliorating the adverse effects of water charges. For example, in relation to urban water supplies, the following suggestions have been made:[47]

- Use weighted tariffs with exemptions for the very poor;
- Decide tariffs by committees with a mixed membership of men and women;
- Train women as paid water supply fitters and plumbers;
- Give poor households the opportunity to share connections if they cannot afford their own individually;
- Employ women as water vendors, resulting in income to them and fairer distribution and pricing;
- Offer credit to women's groups for the installation of water supplies;
- Cross subsidies where higher consumers pay more and lower consumers less, loans to pay off water connection fees over the long term (10-20 years) and adjust payment frequencies to the variable income patterns of poor people.

Women campaigning for better water management

In Ukraine, an environmental NGO, MAMA-86, led by women, has been working to improve drinking water supply in Odessa. MAMA-86 attempts to foster responsibility for improved water management in both local authorities and consumers, particularly in dealing with wasteful leakages. In its drinking water campaign MAMA-86 has successfully initiated water saving efforts, educational activities, installed water meters and negotiated with local authorities to make repairs and plumbing services more affordable. It has also taken legal action against the water utility when it increased bills to consumers by 100 per cent. This experience shows that consumers can get better water services through low-cost replicable technical solutions and the energetic use of democratic processes.

Source: Women's Human Rights Net, "Interview with Jennifer Francis", Gender and Water Alliance (Jennifer Francis), available online from: *http://www...hrnet.org/docs/interview-francis-0310.html*

Gender perspectives on governance of water

The current concern with user participation in the better governance of water includes the desirability of including more women in water management institutions. To this end many policies and project guidelines suggest that women should be particularly targeted as members of water management committees and should play active roles as chairpersons and treasurers.[48]

The arguments for women's involvement are numerous. Women's daily concerns with fetching and using water are thought to make them both knowledgeable about water sources and interested in their reliability, making them well-motivated managers. In areas where there is high male labour migration, women may provide the majority of regularly available community members, so ensuring continuity and consistency of management. It is argued that women can also best represent the views and interests of other women and ensure that water management is not dominated by men's priorities alone. In addition, generalizations about women's abilities and characteristics are often used in support of their greater involvement; women are more trustworthy, community minded and altruistic than men.

The recognition of women's potential as managers and the importance of their involvement in public decision-making processes is welcome and long overdue. The example in Ukraine illustrates how women's involvement in campaigning for better services can secure impressive results for all community members.

However, gender approaches are often implemented in a routinized and tokenistic way that does little to further goals of equality and effectiveness. A gender analysis of participation, decision-making processes and the workings of institutions helps us to understand why many efforts in the past have led to women's partial involvement and why outcomes do not necessarily favour them.

Essentializing women's roles

There is a danger of perpetuating myths and stereotypes about women's essential characteristics, that not only ignore differences between women, but also reinforce women's marginalization into areas where they can exert little power or influence.

For example, there is an often-repeated assumption in the water sector that women make better treasurers for water committees than men.[49] This assertion seems to be based on popular ideas that women are generally more reliable and trustworthy, more community spirited and less likely to spend it on personal consumption than men. However, a gender analysis points towards a more complex view of why and how certain women are able to exercise authority as treasurers. Dikito-Wachtmeister reported that the vast majority of water committee treasurers she surveyed in Zimbabwe were women who were reluctant to give men charge of the money for fear they would spend it on beer.[50] But she also notes the women actually chosen as treasurers were generally older, richer women, whose husbands did not drink, or who had jobs. Women reported that, in the case of working husbands, the money could be reclaimed from the man if the woman embezzled it. Even if it were true that women possess naturally more trustworthy characters and therefore make better treasurers, it is questionable whether their performance in this role necessarily automatically advances gender equality. In the Indian village studied by Joshi, Lloyd and Fawcett the diligent and enthusiastic woman treasurer of the water and sanitation committee was the most vocal in pushing for the exclusion of the low-caste women of the village from all project benefits.[51]

The costs of participation

The favoured way for managing water at the local level is through the establishment of user groups—water-point committees, irrigators associations and the like. An emphasis on the formalization of water management through committees and contracts, and a concern with women's greater involvement in these, is considered both efficient and empowering. A gender analysis helps us to analyse both the costs and benefits of women's participation in such management, and the ways in which their involvement advances or constrains their more general empowerment.

Participation in public decision-making and in collective activities has very obvious costs and benefits in terms of time and effort. Such costs and benefits affect men and women differently. For the poorest people the opportunity costs of such participation may be prohibitive. Many poor households survive by hiring out their own labour on a casual basis. If half a day spent at a meeting means giving up half a day's paid labour, such people are unlikely to participate. The time constraints on women, particularly poor women, and the limiting effects of this on their participation have already been noted.

Problems with long delays in replacing pumps and wells when men are the caretakers led to calls to increased involvement of women. Women often cite cultural constraints on their mobility as a reason for not attending meetings, particularly if attendance involves travelling long distances or being out at night. However, women can sometimes use these cultural norms to their own advantage, to avoid water management work. Women water-point committee members in Zimbabwe were generally unwilling to take the extra time, expense and inconvenience to travel to fetch pump technicians or to report pump breakdowns to district offices. They cited their domestic responsibilities and "traditional" ideas about the inappropriateness of travelling alone in support of this reluctance and called

Overcoming gendered constraints to articulation (Zimbabwe)

The following example illustrates the difficulties of securing all women's participation. A study of women committee members in Zimbabwe showed how wealth, kinship and marriage helped define which women were "respected" enough to represent others in water resources management. One young woman reported: "I cannot be seen to be taking a leading role at meetings attended by older women as this could be perceived as being disrespectful. I am a young woman who has just been married here for a few years, so I cannot be speaking often and taking a lead in these things".

Source: Mercy S. Dikito-Wachtmeister, "Women's participation in decision-making processes in rural water projects: Makoni District, Zimbabwe, (Ph.D. thesis, University of Bradford, 2000), p. 221.

on men (male youths) to run these errands for them. These very same women were apparently unconcerned, however, about travelling alone to church, to market, to weddings and funerals and to visit relatives in town.[52]

The culture of committees and barriers to articulation

Formal committees and associations rely on public forms of decision-making and the transparent confrontation of issues such as access, distribution and rationing. However, there is plenty of evidence that poor people, and particularly poor women, are so dependent on reciprocal relations for their livelihoods, that they are unlikely to take part in such discussions on a free and open basis. For example, they are likely to depend on their wealthier neighbours to hire them as seasonal labourers, to help with food in times of scarcity, to allow them access to resources, and to lend them implements and utensils. Such relations of patronage result in a reluctance to openly confront neighbours, even where decisions being made are patently inequitable, and this preference for conflict avoidance is often reinforced by cultural beliefs in the desirability of living in peace and harmony and the dire consequences that will be incurred by those who upset this equilibrium.

Increasing the numbers of women and improving the balance between women and men in water management committees are desirable aims, but the presence of women on committees should not automatically be assumed to ensure gender equality. Societal structures and norms mean that even where women participate they may not feel able to speak publicly, in front of men, particularly if this also means opposing men's views and interests. Additionally, there may be gendered norms regarding speaking in public. In some situations when women speak in public forums, they speak as delegates on behalf of other women, whereas men speak as individuals representing their own interests. The example from the United Republic of Tanzania shows how gendered constraints to articulation can be overcome, by special measures of consulting women and men separately before bringing them together in public negotiation.

Overcoming gendered constraints to articulation (the United Republic of Tanzania)

One member of the staff from a water project in the United Republic of Tanzania reports, "As a facilitation team we asked the meeting to split into two groups of men and women separately. . . . In the groups female (project staff) facilitated the women's group and male (project staff) went to the men's group. We spent almost one hour to facilitate discussions to the groups. Oh, it was very interesting to see how women were very active to talk in their group. And they made very strong decisions for improvement of the scheme management. In fact, from the decisions made by the women's group, when presented to the general meeting with men, they helped very much to prepare basic contents of the project management scheme. In the general meeting the team gave a chance for the women's representative to make feedback. She looked very confident. And to a very great extent, men in the meeting agreed with the decisions that were made by women. So instead of men seeing that the decisions were made by the individual woman who was presenting, they respected the decisions as a group decision."

Source: Sarah House, "Easier to say, harder to do—gender, equity and water", paper submitted to the Alternative Water Forum, 1-2 May 2003, Bradford Centre for International Development, University of Bradford, pp. 7-8. Available from: *http://www.bradford.ac.uk/acad/dppc/GTP/House.pdf*

Myths of community and the common interests of all women

In the example cited above, although women were able to act as a unitary group to secure their interests, it cannot be assumed that their common interests are always stronger than their differences in water supplies. Indeed, gendered approaches to water resources management may founder if all women are assumed to share all interests. Differences of power and position apply among women as they do between men and women, and wealthier, more powerful women may "capture" participatory processes and ensure that their own interests are furthered within them.

Management in practice

A focus on women's increased participation in formal water institutions often hides the more informal management roles they undertake in practice, through everyday activities and social relations. It is often in the informal context where access to resources is shaped, where gender and power relations are played out, and where inequalities are chal-

lenged or reproduced. Women may find it easier, less costly in terms of time and effort and more effective to participate in water management informally, through social networks, everyday contacts and activities. When women meet at a well to collect water, their discussions about rationing and access should be seen as management. Examples of such management roles abound. Management through such social networks is not, however, necessarily any more equitable than management through committees. One Zimbabwean woman was observed taking water after the pump was "closed" by the pump chairmen. Her relation through marriage to him and her good reputation meant that she could successfully bend the rules where others could not.[53] In the United Republic of Tanzania, caretakers of a village pump, who were responsible for charging users for water, used "estimates" of usage when they had not been physically monitored. The estimations were shaped by prejudices about pastoralists' excessive use of water and pastoralist women's ability to take "too much" water because they used donkeys rather than headloading it.[54] While Cleaver documents a man in Zimbabwe unsuccessfully trying to negotiate access for his cattle at a waterpoint where women were collecting drinking water,[55] House records Tanzanian women waiting for men to finish cattle watering to allow them access to drinking water.[56] Dikito-Wachtmeister records a discussion about the effectiveness of a water committee member.[57] The discussion took place not at a meeting, but while women are collecting water together at the borehole. And Joshi, Lloyd and Fawcett showed how caste-based social practices excluded a low-caste woman from accessing water, even when national policies, village structures and project rules provided for access.[58]

For gender-sensitive approaches to water management to be useful, they need to look beyond committees and meetings. Negotiations happen in various contexts and it is important to understand how gender-specific norms shape everyday access to water, power and decision-making.

The tension between efficiency and equality

In water interventions there may be tension between the desire to get the job done (provide improved water supplies, ensure their sustainable use and management) and the aim of furthering broader social goals such as women's empowerment, gender equality and inclusion of the marginalized. For example, one participatory and nominally gender-sensitive project in India served to reinforce poor women's marginalization by not taking account of the ways in which caste interacted with gender relations to produce multiple dimensions of exclusion from water supplies. Field staff admitted that to insist on the Dalit (lower-caste) woman's representation on the water committee would have antagonized the dominant higher-caste community in the village and would have hindered their main aim of completing the project on time.[59] Another project in India encouraged the participation of "prominent women" on water management structures, as they were more likely to be able to get the job done.[60]

Developing a gender-sensitive, socially informed approach to water resources planning involves learning that takes considerable time and requires critical self-reflection on the part of development practitioners. Progressive social change is an ongoing process and it is necessary to revise methods and approaches constantly.

Drawing on her experience with a water programme in the United Republic of Tanzania, House (2003) reports the following practical methodologies for ensuring the participation of women and marginalized groups in decision-making:

- Ensure that project teams communicate separately with all key groups in communities where there was evidence of exclusion;
- Support open discussions over difficult issues between representatives of minority and majority groups;
- Postpone meetings where women were not present or were in a minority;

Positive gender change resulting from a water project

A Tanzanian village woman, evaluating the water project, gave reason for hope about the positive effects of a gender-sensitive approach for both efficiency and equality reasons. She said: "You should tell them that they should continue to facilitate women and men to be able to work together. I would like to give my personal experience. I am a Water Committee member and early on my husband would not allow me to attend a training session. After he received education on gender, he now allows me to go for training. My husband even cooked for my children when I went to do a training."

Source: Sarah House, "Easier to say, harder to do—gender, equity and water", paper submitted to the Alternative Water Forum, 1-2 May 2003, Bradford Centre for International Development, University of Bradford, p. 10. Available from: *http://www.bradford.ac.uk/acad/dppc/GTP/House.pdf*

Using water for income generation

Women in low-income urban neighbourhoods of Honduras have taken on and managed their own licensed water-vending points. Vending provides part-time employment to poor single women with children, the costs of water are fixed and surplus income is used on neighbourhood projects such as improved supplies. Water is used to generate an income from beer brewing, teashops and a launderette.

Source: N. Espejo, "Gender and the management of drinking water in low income urban communities in Latin America", The Hague, Netherlands, International Water and Sanitation Centre (IRC), 1993.

- Discuss openly and investigate with individual women separately why they had not attended;
- Openly praise women expressing their ideas in open forum to build confidence;
- Support and train women as well as men to take more powerful committee positions;
- Encourage women and men community representatives to monitor openly the participation of key groups in the community;
- Include discussions on gender equality in all community training;
- Include female and male elders from all groups in key decision-making processes over sensitive issues.

Women as paid water workers

Water work has so far been discussed as the voluntary work (comprising contributions of time and labour) involved in planning, construction and management of water supplies. There is plenty of evidence of a gender divide over paid and unpaid water work. Where men participate it is often in paid and sometimes skilled jobs as pump mechanics, water technicians and latrine builders while women are encouraged to assume responsibility for unpaid tasks, such as pump caretaker or water committee member. Increasing women's involvement in such roles alone may simply further the inequitable gendered division of resources and benefits from water activities. Some projects are therefore focusing on increasing the number of women in paid water work. This is seen as desirable for reasons both of efficiency and empowerment. In their roles as well-sinkers, maintenance technicians and water vendors, women may contribute to the reliability of water supplies, and thus to their efficient management. Empowerment objectives are achieved by women gaining a living. Training and remuneration mean that women can exercise more independence and authority both within their households and within the community. Such employment can have beneficial knock-on effects for the community more widely.

Promoting women's role in paid water work involves careful consideration of the demands on women, prevailing ideas about their proper conduct and the dynamics of inter-

Gender-sensitive design of paid work

It is important that the conditions of paid work are socially appropriate and compatible with women's domestic and social responsibilities. Four women in Zimbabwe were trained as well sinkers, paired with men, and sent to work in the bush for three months at a time. A review of their work discovered that gender roles were preserved as the men on the teams were digging the wells and the women were cooking and cleaning the tents. Moreover, women felt that sharing tents with men was inappropriate and that overalls issued were unsuitable as they were too hot and too tight over hips and chest. When all women teams were formed instead, women felt that they had no privacy due to over-frequent visits of the male supervisors. Women also complained of irregular and inadequate payment as they frequently had to interrupt the well sinking and return home to attend to their family duties. After consultation with local communities, women were offered training for paid jobs as latrine builders instead of well sinkers. Women could build latrines in or close to their home villages, where they could complete the work faster and, therefore, be paid quicker. There was no need to leave home and the masonry skills could be employed in other paid building projects too.

Source: Nomathemba Nyoni, quoted in *Mainstreaming Gender in Water Management: A Practical Journey to Sustainability: A Resource Guide*, (New York, United Nations Development Programme, 2003), pp. 63-64. *http://www.undp.org/water/genderguide*

action between men and women. There are implications in the work they undertake and the environment in which they conduct it.

Gender mainstreaming in water resources management

Putting gender awareness into practice

How can an awareness of the complexity of issues around gender and water be translated into practical actions with tangible results for both efficiency and gender equality? Gender mainstreaming strategies require changes in institutions to facilitate incorporating gender sensitivity at all levels and in all activities.

Putting commitments into practice in the water sector is important. Although there is growing recognition of the importance of social components of interventions, technical and economic aspects continue to dominate and are often perceived as quicker and simpler to implement. It cannot be taken for granted that the existence of a gender-equality policy is sufficient to ensure women's full participation in water programmes, or that gender considerations are always taken into account. Generally speaking there is a significant gap between policy definition and implementation, linked to the fact that gender analysis is still not a systematic and integral part of the majority of water interventions.

In many cases, gender policy documents tend to be vague and consist of catch-all phrases that offer little concrete guidance at the implementation stage. This may be exacerbated by gender specialists whose advice is couched in general terms rather than concrete guidance for action. Phrases such as "a gender perspective should be adopted" or "all gender-related issues should be specified" leave staff at a loss as to what this actually means and how it can be put into practice. This is made worse by project documentation that continues to talk in gender-neutral terms referring to the "community", the "users" and the "consumers", rather than referring to people in more socially specific terms, such as "poor women", "wealthy women" or "local male leaders".

Mechanisms are needed to facilitate the dissemination and implementation of a gender policy throughout relevant organizations at both the central level and in the field. These include policy statements and budgetary commitments, procedures relating to institutional learning, responsibility and accountability, planning and evaluation methodologies, personnel policy and training, and data collection. Additionally evidence suggests that these initiatives work best within a legal framework that specifically recognizes human rights and where there are strong agencies advocating for the uptake of these rights. An important instrument is the Convention on the Elimination of All Forms of Discrimination against Women.[61]

A number of manuals now exist to facilitate gender mainstreaming in the water sector and several are listed in the appendix. The following section will briefly consider the need for organizational change, the implications for the project/programme planning process, the issue of training and the need for continued work with other agencies in the general legal and political context.

Organizational change

Thinking about gender equality, social structure and participation involves different skills and processes to planning technical aspects of water management. Unlike engineering, there are no blueprints, no common technically appropriate designs for social analysis. An understanding of gender equality requires consideration of complex human motivations and relationships that manifest themselves in different ways, according to context, and that also change over time. Views on the concepts of gender equality are influenced by an individual's subjectivity, shaped by the upbringing, education, experiences and the norms of the specific society where the individual lives. This subjectivity applies to water planners and managers, as much as to water users.

It is increasingly understood that the adoption of strong gender policies within organizations requires processes of critical self-reflection at all levels. This facilitates greater gender awareness among all staff, and ways of monitoring whether the organization itself is operating in a gender-sensitive manner. Responsibility for gender concerns is often confined to a specific gender unit or to one or two highly committed staff who approach the subject with commendable zeal but are sometimes sidelined by the rest of the organization. Measures to increase the voice of staff who champion gender-sensitive approaches are needed. This can be achieved through recruitment and selection procedures and training and capacity-building to ensure more women in management positions. However, it should not be assumed that all women will automatically be champions of gender equality. The value of men as advocates for gender-equitable policies is increasingly recognized, as they are sometimes perceived as less threatening by other men. Useful checklists for assessing the competencies of managers in promoting gender-equitable approaches are contained in a recent report of the United Nations Development Programme on mainstreaming gender in water resources management.[62]

Planning and evaluation

The need for a reflective approach is reinforced by the lessons learned

from studies of organizations attempting to implement participatory approaches, and from advances in thinking about development planning and management.[63] Thompson finds that organizations can best implement participatory approaches when they themselves adopt a flexible, "learning" approach to their work. This involves interventions being viewed as experiments that require constant adaptation to circumstances, managers being supportive of innovative and experimental approaches and seeing "failure" as generating useful lessons for future interventions. Participatory principles must apply to external funding and implementation organizations equally as much as to local partners. Development planning and management that emphasizes "process" approaches, that are longer-term, more flexible interventions, often based on general guiding principles rather than tightly specified activities, is desirable.

Handbooks, guidelines and "tool kits" exist to help planners to integrate gender concerns at every stage of development interventions. These provide a useful resource, combining general discussions of concepts, with specific lists of questions to be asked and techniques to be used to facilitate gender-equitable approaches. One example of such guidance is provided by Sida, which specified questions to be asked at each stage of the project cycle which cover issues ranging from how consultation is designed, how specific indicators of gendered involvement are used, to whether budgets are allocated to ensure gender-equitable approaches.[64] Such resources are to be welcomed although it should be emphasized that they will only be practical if used in a self-critical, reflective manner, adapted to specific contexts rather than utilized as routine checklists. Checklists and other guidelines have little practical impact if they have not been properly disseminated to staff.

The collection and use of data critically affects the ability to assess the impact of gendered approaches to water resources development. Despite calls in policy documents for sex-disaggregated statistics and for the monitoring of gender-based patterns of inclusion and exclusion, such data is often not routinely collected, processed or used. There appears to be a strong belief among policy makers that the kind of data required is statistical (or "hard" data), a reflection perhaps of the technical nature of much water planning. Quantitative data might include counting the number of facilities provided, the number of women on decision-making bodies, counting the time/effort saved by women and men by improving water resources, enumerating increased water use and reductions in water-related disease. Other commentators, however, have suggested that what is lacking is the reporting of processes which may reflect on some of the more qualitative issues of gender-based relationships and interventions. More gender-specific information about household decision-making and its consequences, livelihood practices and the public and private negotiation of gender roles is urgently required, and both qualitative and quantitative data could contribute to this. Experience suggests that descriptive case studies and process reporting, written up by the field staff, can help to reveal some of the dynamics of gender inequality and water use and also assist staff in developing critical self reflection and awareness.

Systematic incorporation and review of such data, and of the experience generated in trying to implement gender-sensitive approaches,

Innovative participatory assessment techniques

An interesting example of applying gender analysis is demonstrated by WaterAid, an NGO that used a variety of methods, many of them participatory, to review the impact of their work in four countries over a 10-year period. This moved away from conventional assessments where project impacts are evaluated mainly in technical terms of mechanical measures of inputs and outputs. Instead it situated projects within the social context of the community, and measured impact using a combination of qualitative and quantitative data. Community members themselves were helped to develop and reflect upon a number of key indicators that tracked the social, economic and health impacts brought about by the project. The learning from this process included some factors which the planners had overlooked but which had strong gender significance, for example the ability of women with improved water supplies to maintain better menstrual and post-childbirth hygiene. Additionally, the exercise provided a learning process for the project staff of the competence of the community members to reflect upon impacts of interventions on their own lives. The methodologies used during the study were subsequently integrated into impact assessment guidelines for the use of other programme staff.

Source: Impact Assessment Guidelines, (London, WaterAid, 2002) and Vicky Blagbrough, "How WaterAid looked back", *Waterlines*, vol. 22, No. 1 (2003), pp. 19-21.

can assist in processes of evaluation and impact assessment and in institutional learning.

Training

Training is repeatedly mentioned as vital to the promotion of effective gender analysis within organizations. The aim is not to try to make everyone in an organization a gender expert, rather to ensure that all staff have the conceptual and analytical tools that will support utilization of gender and social analysis. For example, water resources managers could usefully understand why gender differences and inequalities are relevant in specific situations; identify when particular actions are required; know where to go for additional support and expertise and know how specific tools are applied.[65] Suggestions for training at a variety of levels include the need for gender-awareness training for all staff; training in techniques of social analysis; and training of women in areas in which they are under-represented—in technical areas and in leadership roles. The importance of targeting awareness training at men who will themselves become gender trainers and facilitators is also emphasized.[66] Increasing the "gender competencies" in the water sector must involve ongoing processes rather than one-off efforts and as such need to be mainstreamed into staff development and capacity-building activities.

One key aspect of gender training relates to developing the ability of gender specialist staff to reach out to and communicate with non-specialists in non-judgemental ways. This is particularly important in the multi-disciplinary water sector. Additionally water interventions will deliver best results when linked to other complementary initiatives, for example in education, community development and income generation. Evidence suggests that changes in women's legal rights (for example, to hold title to land, to inherit, to be represented) do not necessarily yield the desired results unless linked with strong advocacy for positive and sustained action to secure this. Deere and Leon have speculated that in various Latin American countries, legal changes to secure such rights for women have had unclear effects on women's actual control over land and water resources.[67] Such control has been most effectively achieved where strong lobbying movements have kept these issues in the forefront of political and policy agendas.

Conclusions

Gender-sensitive approaches to water resources management are desirable for achieving efficiency, social equity and gender-equality goals. Targets, such as those in the Millennium Development Goals relating to water, are unlikely to be achieved unless gender perspectives are integrated into planning and implementation activities. Instrumental approaches to ensuring more reliable, sustainable and well-managed water supplies are essential to achieving access to water for all, and for ensuring the maintenance of water in the interests of ecological balance and the needs of future generations. However, social and economic targets (such as eliminating poverty, furthering empowerment of marginalized groups, supporting the resilience of the vulnerable and ensuring resources are appropriately managed by those who use them) will only be achieved by a wider focus on social and power relations. Adopting gender-sensitive approaches therefore means rethinking water development in a number of ways.

Firstly, it is critical to recognize the need for intersectoral cooperation. People's livelihoods are not divided into subsectors and imposing artificial boundaries on the management of water for different uses is unlikely to yield results. A gender-sensitive approach helps to overcome some of the artificial subsectoral divisions in water as it involves looking at women's and men's lives as a whole and how they are shaped through gender norms and practices.

Secondly, gender sensitivity necessitates a flexible learning approach to development interventions. Just as natural conditions and the uses of water vary from place to place, so gender expectations and norms differ according to context. Blueprint approaches to project planning and management cannot reflect this, so development agencies need to pay attention to training and capacity-building which allows for a reflective and flexible approach to water resources management at the local level. Gender relations can and do change over time, and, by adopting participatory learning approaches, it is possible for agencies to support and facilitate such changes in progressive ways.

Thirdly, gender relations also impact development institutions, which need to pay attention to the way that such relations impact on the functioning of their own work, as well as on water resources management at the local level. This involves consideration of the type of data collected, the gender balance of staff and the need for gender-awareness training within an organization.

Frameworks for gender analysis of water resources management that encompass issues of social and gender relationships as well as infrastructural provision are required to track both collective and individual actions and recognize both the separateness and interdependencies of women's and men's interests. Such an approach is unlikely to be achieved through the use of checklists alone, and gender analysis cannot be achieved in a one-off event. Rather it requires a re-thinking of the way in which development accommodates diversity, complexity and change, while retaining overall goals of an equitable and dignified life for all.

Selected resources

Journals

Agriculture and Human Values, special issue "Choice, complexity and change: gendered livelihoods and the management of water", vol. 15, No. 4 (1998).

Environment and Urbanization, special issue "Water and sanitation", vol. 15, No. 2 (2003), International Institute for Environment and Development. Available online from: *http://www.iied.org/eandu*

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Natural Resources Forum, special issue "Women and natural resources management", vol. 20, No. 2 (1996) (London, Butterworth-Heinemann for the United Nations Department of Technical Cooperation for Development).

Waterlines, special issue "Gender and water—six years on", vol. 17, No. 1 (1998). Available online from: *http://www.oneworld.org/itdg/journals/waterlines*

Web sites

http://www.un.org/womenwatch/ianwge/activities/tfs2003
Inter-Agency Network on Women and Gender Equality (IANGWE) Task Force on gender and water

http://www.bridge.ids.ac.uk
Bridge produces brief gender and development bulletins, involving state of the art updates, to raise awareness among policy makers.

http://www.oecd.org/dac
The Development Assistance Committee (OECD) has a web site on gender equality that lists publications and reports on the work of Gendernet—a network on gender equality in which gender experts from development cooperation agencies meet to define common approaches.

http://www.genderandwateralliance.org
The Gender and Water Alliance is a network of individuals from around the world that aims to share information, and undertake advocacy and capacity-building initiatives in gender and water.

http://www.siyanda.org
Siyanda is a database of gender and development materials, some of which relate to the social analysis of water development.

http://www.unicef.org/programme/wes
United Nations Children's Fund Water, Environment, Sanitation and Hygiene Education programme. This web site provides links to statistics, resources and details of UNICEF activities on water and sanitation.

http://www.wateraid.org.uk
WaterAid is an international NGO dedicated exclusively to the sustainable provision of safe domestic water, sanitation and hygiene education to the world's poorest people.

http://www.irc.nl/products/publications/ajw
Women, Water and Sanitation is an annual abstract journal.

http://www.un.org/womenwatch
Womenwatch is a gateway to United Nations gender-related information on the advancement and empowerment of women.

http://www.worldbank.org/gender
The GenderNet site describes how the World Bank seeks to reduce gender disparities and enhance women's participation in economic development.

http://www.worldwatercouncil.org
The World Water Council is an international policy think tank dedicated to strengthening awareness and thinking about integrated management of the world's water resources.

http://www.world.water-forum3.com
This site contains the documentation for the Third World Water Forum held in Kyoto in March 2003, including links to policy statements and the discussions of particular sessions.

Guidance for gender mainstreaming in the water sector

ADB checklist *http://www.adb.org/Documents/Manuals/Gender_Checklists/Water*

AUSAID checklist *http://www.ausaid.gov.au/publications/pdf/gender_guidelines_water.pdf*

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Guidance for gender analysis/participatory methodologies

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Publications

World Survey of the Role of Women in Development

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Handbook for Parliamentarians

The Convention on the Elimination of All Forms of Discrimination against Women and its Optional Protocol

This *Handbook*, produced by the Division for the Advancement of Women, Department of Economic and Social Affairs of the United Nations Secretariat, in collaboration with the Inter-Parliamentary Union, offers a comprehensive and educational presentation of the Convention on the Elimination of All Forms of Discrimination against Women and its Optional Protocol. The *Handbook* presents the background to and content of the Convention and the Optional Protocol and describes the role of the Committee on the Elimination of Discrimination against Women, which secures implementation at the national level. It provides examples of good practices and gives an overview of what parliamentarians can do to ensure effective implementation of the Convention and encourage use of the Optional Protocol. It also proposes model instruments and reference materials as aids designed to facilitate the work of legislators. The *Handbook* is available in Arabic, Chinese, English, French, Russian and Spanish.

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